

January 24, 2022

Mr. David Albright  
Manager, Groundwater Protection Section  
USEPA Region 9 (WTR-4-2)  
75 Hawthorne St  
San Francisco, CA 94105

Subject: Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1  
Monthly Update for AL/AQL Exceedances at Supplemental Monitoring Well M59-O

Dear Mr. Albright:

Florence Copper is providing this monthly update of supplemental monitoring well M59-O alert level (AL) and/or Aquifer Quality Limit (AQL) exceedances under Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1 (Permit).

Florence Copper has been voluntarily monitoring M59-O monthly for the parameters listed in Table 1 (see attached), and previously submitted a monthly report on December 29, 2021. Table 1 has been updated to include the most recent laboratory results from the monthly sample collected on December 13, 2021 and received on January 7, 2022. The general trend for sulfate, total dissolved solids (TDS), and magnesium concentrations is downward from peak levels in July 2021. The January monthly sample was collected on January 13, 2022 and the results are pending.

Redevelopment of injection, recovery, and observation wells in the wellfield continued during the month as part of the ongoing rinsing activities. Observation wells on the east side of the wellfield (O-01 and O-02) were redeveloped in December by brushing the well casing and removing the resulting sediments by airlifting. To assist with rinsing at M59-O, observation well O-03 has been pumped at 15 gpm since mid-December, and observation well O-02 has been pumped at 15 gpm since mid-January.

Hydraulic gradients were maintained throughout the month.

Florence Copper will continue monthly sampling of supplemental monitoring well M59-O for parameters which exceeded the ALs and AQLs and will report these results monthly to EPA until all concentrations are below the ALs and AQLs.

Please feel free to contact me should you have any questions or comments.

Sincerely,  
**Florence Copper, Inc.**



Brent Berg  
General Manager

Cc: Nancy Rumrill, EPA Region 9  
Daniel Reeder, ADEQ

Table 1. Supplemental Monitoring Well M59-O Monthly Sampling Results

M59-O	Parameter						
	Magnesium (mg/L)	Sulfate (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Uranium (mg/L)	Adjusted gross alpha (pCi/L)	Radium 226+228 (pCi/L)	Gross beta (pCi/L)
<b>AL</b>	23	202	854	0.0052	15.8	6.9	16
<b>AQL</b>	--	--	--	--	15.8	6.9	16
12/28/2020	<b>57.2</b>	<b>865</b>	<b>1,860</b>	<b>0.037</b>	<b>73.5 ± 3.7</b>	<b>19.8 ± 0.8</b>	<b>43.2±2.7</b>
1/18/2021	<b>63.1</b>	<b>960</b>	<b>1800</b>	<b>0.038</b>	<b>35.4 ± 2.5</b>	<b>22.0 ±0.8</b>	<b>52.7±3.0</b>
2/22/2021	<b>26.5</b>	<b>383</b>	<b>970</b>	<b>0.0088</b>	<b>17.9±1.4</b>	6.2±0.5	NA
3/23/2021	19.1	<b>228</b>	762	0.003	<b>18.8±1.5</b>	<b>7.0±0.6</b>	NA
4/14/2021	19.8	<b>249</b>	780	0.0038	<b>18.1±1.2</b>	<b>10.9±0.7</b>	<b>19.6±1.9</b>
5/19/2021	<b>65.6</b>	<b>999</b>	<b>2010</b>	<b>0.0096</b>	<b>49.1±2.1</b>	<b>18.0±0.8</b>	<b>52.1 ± 3.3</b>
6/1/2021	<b>59.8</b>	<b>850</b>	<b>1900</b>	<b>0.0117</b>	<b>57.3±2.9</b>	<b>13.6±0.7</b>	<b>36.9±2.9</b>
7/19/2021	<b>70</b>	<b>1200</b>	<b>2300</b>	<b>0.0187</b>	<b>29.4±3.2</b>	<b>15.4±0.7</b>	<b>41.6±3.2</b>
8/24/2021	<b>59</b>	<b>1100</b>	<b>2100</b>	<b>0.0326</b>	<b>31.3±3.7</b>	<b>13.7±0.6</b>	<b>36.8±3.1</b>
9/20/2021	<b>59</b>	<b>990</b>	<b>2000</b>	<b>0.024</b>	<b>24.4±3.4</b>	<b>10.3±0.6</b>	<b>38.6±3.1</b>
10/19/2021	<b>55</b>	<b>820</b>	<b>1800</b>	<b>0.043</b>	<b>28.0±2.0</b>	<b>10.9±0.6</b>	<b>33.2±2.7</b>
11/9/2021	<b>65</b>	<b>670</b>	<b>1500</b>	<b>0.0096</b>	<b>27.9±2.3</b>	<b>11.9±0.6</b>	<b>28.0±2.4</b>
12/13/2021	<b>43</b>	<b>720</b>	<b>1600</b>	<b>0.011</b>	<b>39.5±2.5</b>	<b>12.3±0.6</b>	<b>34.3±2.5</b>

**BOLD** values are exceedances of AL and/or AQL

NA: not analyzed